# REMARKS

The Office Action dated July 27, 2007 has been received and considered. Reconsideration of the outstanding rejections in the present application is respectfully requested based on the following remarks.

**Anticipation Rejection of Claim 58**

At page 2 of the Office Action, claim 58 is rejected under 35 U.S.C. § 102(e) as being anticipated by Deshpande (U.S. Patent No. 7,191,246). This rejection is respectfully traversed.

Deshpande teaches a "method of selecting a data transmission rate for a [sic] heterogeneous network clusters [using] the results of reports of local reception bandwidth and determines an appropriate data rate that either minimizes data loss or minimizes a cost function relating distortion and local bandwidth utilization for each cluster." *Desphande*, Abstract. Local reception bandwidths 86 for receivers are reported using RTCP reports, which a server periodically evaluates "to identify clusters on the basis of local reception bandwidth 86 and to facilitate dynamic revision of the data rate for selected data streams directed to each of the clusters 88." *Id.*, col. 4, lines 39-44. A clustering algorithm is used "to identify clusters of receivers reporting similar bandwidth." *Id.*, col. 4, lines 45-48. As taught by Deshpande, the "clustering step is carried out periodically at the server 86 using the current cluster centers as the initial cluster centers for the next clustering update." *Id.*, col. 5, lines 1-3. Desphande further teaches that the "frequency of cluster updating is limited by the processing capabilities of the server. . . ." *Id.*, col. 5, lines 9-11. After the bandwidth clusters are identified, the server selects "a data transmission rate . . . for the data stream directed to each cluster 88." *Id.*, col. 5, lines 15-18. As discussed in greater detail below, a number of the pending claims recite subject matter related to the relationship between a multicast address or a channel selected and a transmission rate, however, while Desphande teaches in the Background section that multimedia applications can be transmitted as a plurality of data streams to a plurality of multicast group addresses, Desphande does not disclose or suggest that each cluster is associated with a different multicast group address. Rather, Desphande merely teaches that a data transmission rate is selected "for the data stream directed to each cluster 88." *Id.*

Turning to independent claim 58, the claim recites the features of "determining, *at the networked display device*, a first *multicast address* from a plurality of multicast addresses based on the first data transmission rate [of a transmission connection of the networked display device], each of the plurality of multicast addresses associated with a corresponding version of a plurality of versions of a video stream." The Office Action asserts that the passage of Deshpande at col. 5, lines 3-8 discloses these features. *Office Action*, p. 2. For ease of reference, this cited passage is reproduced below in its entirety:

> Since the clustering is periodically updated utilizing reported bandwidth, the initial cluster centers for the algorithm can be based on available information about the bandwidth of data receivers, such as the connection bandwidth of types of receivers (56 Kbps modem, DSL, cable modem, etc.) or spaced across the range of potential receiver bandwidth. The frequency of cluster updating is limited by the processing capabilities of the server but can be based on, for examples, receipt of a number of RTCP reports or the receipt of a number of reports wherein a threshold number of receivers report a change of bandwidth exceeding a change threshold 92.

Contrary to the assertions of the Office Action, it is respectfully submitted that the above-reproduced and cited passage of Desphande fails to disclose or suggest that a receiver (which the Office alleges is equivalent to the claimed network display device) determines a first multicast address from a plurality of multicast addresses based on a data transmission rate of a transmission connection of the receiver. Rather, the above-reproduced passage, along with the sentence that precedes it ("The clustering step is carried out periodically *at the server 86* . . ." (emphasis added)), merely teaches that the server 86 periodically reclusters the receivers based on their reported bandwidths. Desphande does not disclose or suggest that each cluster has its own multicast address, nor does Desphande disclose or suggest that it is the member of a cluster that determines a multicast address for the cluster. In fact, neither the above-cited passage nor any remaining passage of Desphande teaches the determination of a multicast address from a plurality of multicast addresses in any manner, much less that it is the receiver that determines a multicast address from a plurality of multicast addresses based on the data transmission rate of a transmission connection of the receiver as would be consistent with claim 58 (assuming, *arguendo*, the Office is accurate in its characterization of the receivers as networked display devices). Accordingly, Desphande fails to disclose, or even suggest, at least the features of

"determining, at the networked display device, a first multicast address from a plurality of multicast addresses" as provided by claim 1.

Further, claim 1 recites "each of the plurality of multicast addresses associated with a corresponding version of a plurality of versions of a video stream." As taught by Desphande, the data transmission rate of a data stream (allegedly the claimed "corresponding version of . . . a video stream") is determined "following identification of the bandwidth clusters." *Desphande*, col. 5, lines 15-18. Accordingly, even if it was assumed, *arguendo*, that each cluster is associated with a corresponding multicast address of a plurality of multicast addresses and it further was assumed, *arguendo*, that the receivers determine their multicast addresses from a plurality of multicast addresses, in this instance the each of the "plurality of multicast addresses" would not be associated with a corresponding version of a plurality of versions of a video stream as the corresponding version (i.e., the data transmission rate of the video stream) would not be determined until after the "multicast address" had been selected as part of the "identification of the bandwidth clusters. Accordingly, Desphande fails to disclose, or even suggest, the claimed features of "each of the plurality of multicast addresses associated with a corresponding version of a plurality of versions of a video stream."

Desphande fails to disclose, or even suggest, a number of features recited by claim 58 and thus Desphande fails to disclose each and every feature recited by claim 58. Reconsideration and withdrawal of the anticipation rejection of claim 58 therefore is respectfully requested.

**Obviousness Rejections of Claims 59-63**

At page 3 of the Office Action, claim 59 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Deshpande. At page 4 of the Office Action, claim 60 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Deshpande in view of Schober (U.S. Patent Publication No. 2001/0044835 A1). At page 4 of the Office Action, claim 61 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Deshpande in view of Hinderks (U.S. Patent Publication No. 2002/0067730 A1). At page 5 of the Office Action, claim 62 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Deshpande in view of Aho (U.S. Patent No. 6,198,941 B1). At page 6 of the Office Action, claim 63 is rejected under 35 U.S.C. § 103(a) as

being unpatentable over Deshpande in view of Aho and further in view of Hinderks. These rejections are respectfully traversed.

As discussed above, Desphande fails to disclose or suggest at least one feature recited by claim 58. The Office Action does not assert that Schober, Hinderks or Aho discloses or suggests those features of claim 58 lacking in Deshpande, nor in fact do these references disclose or suggest those features. Accordingly, the proposed combinations of Desphande, Schober, Hinderks, and Aho fail to disclose or suggest each and every feature recited by claims 59-63 at least by virtue of their dependency from claim 58. Moreover, these claims recite additional novel features.

To illustrate, claim 61 recites the additional feature of "wherein determining the first multicast address comprises performing a table lookup based on the first data transmission rate." The Office points to the passage of Hinderks at para. 54 as teaching these features. *Office Action*, p. 5. The Office's rationale for combining these references is so as to "enable the system to use a one-way network." *Office Action*, p. 5. As a first issue, the cited passage of Hinderks does not disclose, or even suggest, that the "fixed look-up table" is accessed by the "IP multicast client/recipient" based on its data transmission rate. As a second issue, the clustering process that is central to the method of Desphande is based on RTCP reports of the local reception that are periodically provided from the receivers to the server (*see Desphande*, col. 4, lines 20 – col. 5 line 14), and thus "enable[ing] the system to use a one-way network" would destroy the functionality of the system of Desphande as a one-way network would prevent the receivers from delivering the RTCP reports to the server. Accordingly, one would not find it obvious to combine the teachings of Desphande and Hinderks as proposed by the Office.

In view of the foregoing, reconsideration and withdrawal of the obviousness rejections of claims 59-63 is respectfully requested.

**Obviousness Rejection of Claim 31**

At page 7 of the Office Action, claim 31 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Cheriton (U.S. Patent No. 6,831,971) in view of Deshpande and further in view of Schober. This rejection is respectfully traversed.

Claim 31 recites the features of "determining at the display device a select channel of a plurality of channels of a multicast channel based on the data transmission rate." The Office asserts that Cheriton teaches "subscribing at the display device to a first channel of a plurality of channels" but acknowledges that Cheriton fails to teach that the subscribing is based on a data transmission rate, for which the Office relies on Desphande under the same rationale described above. *See Office Action*, p. 7.

As discussed above, while Desphande may disclose determining a data transmission rate for a display device, Desphande fails to disclose or suggest that it is the display device that selects a channel from a plurality of channels based on the data transmission rate. Rather, Desphande teaches that it is the server, not the receiver (the alleged display device), that determines the clusters and determines what data transmission rates to apply to a data stream based on the determined clusters.

Turning to Cheriton, as discussed at pages 1 and 2 of the Remarks in Support of the Pre-Appeal Brief Request for Review mailed January 18, 2007 (hereinafter, "the Pre-Appeal Brief"), Cheriton instead teaches that each subscriber 550 joins the same "single source multicast group (S, G)" and it is the NAT compatible switch 300 (which is separate from the subscribers 550) that remaps different multicast streams to different subscriber groups via virtual network address translation mapping such that "subscribers 550 to such a single-source, virtual host multicast would likely be unable to detect a source transition because all of the traffic will appear to the subscribers [550] as originating from a single virtual host (S, G)". *See, e.g., Cheriton*, col. 3, lines 22-41, col. 3, line 65 – col. 4, line 53, and col. 5, lines 19-21 (emphasis added). Thus, Cheriton clearly teaches that each subscriber 550 **subscribes to the same multicast address** and it is the NAT compatible switch 300 that reroutes different multicast streams. Thus Cheriton fails to disclose or even suggest that a subscriber 550 (as the alleged "display device") determines a channel of a plurality of channels.

In the Advisory Action, the Office responds to the Applicants' explanation that Cheriton fails to disclose or suggest "determining at the display device a first channel of a plurality of channels" by stating "Cheriton discloses [at col. 7, lines 1-8] that there is a low-resolution channel and a high resolution channel. As [sic] two channels would represent a plurality of

channels." *Advisory Action*, p. 2. The Applicants understand the Office's position that Cheriton discloses that a plurality of channels are available for transmission to the subscribers 550 (which the Office considers to be the claimed "display device"). However, Cheriton fails to disclose, or even suggest, that it is the subscriber 550 that determines a first channel from these channels. The Advisory Action further points to the passage at col. 7, lines 5-9 of Cheriton as allegedly teaching "that only the listening hosts subscribed to the high-resolution channel will receive the high resolution encoding."[1] *Id.*, p. 2. However, it is respectfully submitted that the Office has overlooked the preceding portion of this passages. The entire passage states:

> As a further alternate embodiment, a headend router can also provide different translations based on aspects of the packet data. Thus, for example, if some listening hosts are connected to the network by a low bandwidth link and the video source uses a multilevel video resolution encoding or a similar basis for selective drop (as known in the art), packets representing the low resolution component can be translated to one multicast channel. High-resolution component packets can be translated to a second multicast channel. Only those hosts subscribing to the high-resolution channel will receive the high resolution encoding, providing an alternate method of implementing differentiated services over IP.

*Cheriton*, col. 6, line 63 – col. 7, line 9 (emphasis added).

This passage, like the remainder of Cheriton, provides no disclosure or suggestion that it is the "listening host"/subscriber 550/display device that determines a first channel from a plurality of channels. Rather, upon consideration of the entire passage, it will be understood that Cheriton teaches an alternate embodiment whereby a headend router, which is separate from the subscribers 550, can perform network translation so that "packets representing the low resolution component" can be translated to one multicast channel and "high-resolution component packets" can be translated to another channel. As disclosed by Cheriton, every "listening host"/subscriber 550 subscribes to the same "single-source multicast group" and thus, in this alternate embodiment, the headend router, rather than the "listening host"/subscriber, determines whether a "listening host"/subscriber 550 is to receive the high-resolution channel or the low-resolution channel. *See, e.g., Cheriton*, Abstract and col. 4, line 40.

Thus, as discussed above, a subscriber 550 subscribes to the same multicast address, and it is the NAT compatible switch 300 that determines which of the low-resolution channel or the

---

[1] The Advisory Action incorrectly identifies this passage as col. 6, lines 1-8 of Cheriton.

high resolution channel is to be transmitted to the subscriber 550. Therefore, it is the NAT compatible switch 300, rather than the subscriber 550/display device, that determines the select channel of a plurality of channels, and not the **display device** as recited by claim 31. Accordingly, contrary to the Office's assertions, Cheriton fails to disclose, or even suggest, Accordingly, Cheriton fails to disclose or suggest at least the features of "determining **at the display device** a first channel of a plurality of channels" as recited by claim 31. Further, as Desphande fails to disclose these features and as the Office does not assert that Schober discloses or suggests these features (and in fact Schober does not disclose or suggest these features), the proposed combination of Cheriton, Desphande, and Schober fails to disclose or suggest the claimed features of "determining at the display device a first channel of a plurality of channels," much less that the first channel is determined based on a data transmission rate between the display device and a wireless access point as provided by claim 31. The proposed combination of Cheriton, Desphande, and Schober therefore fails to disclose or suggest each and every feature recited by claim 31.

**Obviousness Rejection of Claim 32**

At page 8 of the Office Action, claim 32 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Cheriton in view of Deshpande in view of Schober and further in view of Sachs (U.S. Patent Publication No. 2002/0080802). This rejection is respectfully traversed.

Claim 32 depends from claim 31. As discussed above, the proposed combination of Cheriton, Desphande, and Schober fails to disclose or suggest features recited by claim 31. The Office does not assert that Sachs discloses or suggests these features of claim 31 missing from the teachings of Cheriton, Desphande, and Schober, nor in fact does Sachs disclose or suggest these missing features. Accordingly, the proposed combination of Cheriton, Desphande, Schober and Sachs fails to disclose or suggest each and every feature recited by claim 32 at least by virtue of its dependency from claim 31. Moreover, claim 32 recites additional novel features. Reconsideration and withdrawal of the obviousness rejection of claim 32 therefore is respectfully requested.

## Conclusion

The Applicants respectfully submit that the present application is in condition for allowance, and an early indication of the same is courteously solicited. The Examiner is respectfully requested to contact the undersigned by telephone at the below listed telephone number in order to expedite resolution of any issues and to expedite passage of the present application to issue, if any comments, questions, or suggestions arise in connection with the present application.

The Applicants believe no additional fees are due, but if the Commissioner believes additional fees are due, the Commissioner is hereby authorized to charge any fees, which may be required, or credit any overpayment, to Deposit Account Number 50-1835.

Respectfully submitted,

/Ryan S. Davidson/                                              October 4, 2007
Ryan S. Davidson, Reg. No. 51,596                              Date
LARSON NEWMAN ABEL POLANSKY & WHITE, LLP
5914 West Courtyard Drive, Suite 200
Austin, Texas 78730
(512) 439-7100 (phone)
(512) 439-7199 (fax)